

CLAIMS

1. A data broadcast recoding method, characterized by comprising: recording management data in a first file; and recording normal broadcast and data broadcast in at least one file different from the first file.

2. The data broadcast recoding method according to Claim 1, characterized in that the normal broadcast and the data broadcast are commonly recorded in a second file.

3. The data broadcast recoding method according to Claim 1, characterized in that the normal broadcast is recorded in a second file, the data broadcast is recorded in the second file or a third file, and whether the data broadcast is recorded in the second file or the third file is indicated by a data broadcast recording file ID flag in the management data.

4. The data broadcast recoding method according to Claim 1, characterized in that the normal broadcast and the data broadcast is recorded in a second file, data obtained by copying or cutting all or a part of the data broadcast or all or a part of recorded data broadcast recorded in the second file is recorded in a third file as broadcast extraction data, and a content of the broadcast extraction data is indicated by a data broadcast ID flag in the management data.

5. The data broadcast recoding method according to Claim 1, characterized in that the normal broadcast and the data broadcast are recorded in a second file, data obtained by copying or cutting all or a part of the data broadcast or all or a part of recorded data broadcast recorded in the second file is recorded in any of third and subsequent files as broadcast extraction data in accordance with a combination of a data type and an encoding format, and a content of the broadcast extraction data is indicated by a data broadcast ID flag in the management data.

6. The data broadcast recoding method according to Claim 1, characterized in that the normal broadcast is recorded in a second file, the data broadcast is recorded in the second file or a third file, data obtained by copying or cutting all or a part of the data broadcast or all or a part of recorded data broadcast recorded in the second or third file is recorded in the third file or a fourth file as broadcast extraction data, whether the data broadcast is recorded in the second file or the third file is indicated by a data broadcast recording file ID flag in the management data, and a content of the broadcast extraction data is indicated by a data broadcast ID flag in the management data.

7. The data broadcast recoding method according to Claim 1, characterized in that the normal broadcast is recorded in a second file, the data broadcast is recorded in the second file or a third file, data obtained by copying or cutting all or a part of the data broadcast or all or a part of recorded data broadcast recorded in the second or third file is recorded in any of fourth and subsequent files as broadcast extraction data in accordance with a combination of a data type and an encoding format, whether the data broadcast is recorded in the second file or the third file is indicated by a data broadcast recording file ID flag in the management data, and a content of the broadcast extraction data is indicated by a data broadcast ID flag in the management data.

8. The data broadcast recoding method according to Claim 1, characterized in that broadcast related information is recoded in a file different from the first file and a file for recording the normal broadcast.

9. The data broadcast recoding method according to Claim 2, characterized in that broadcast related information is recorded in a third file, and a content of the broadcast related information is indicated by a broadcast related information ID flag in the management data.

10. The data broadcast recoding method according to Claim 3, characterized in that broadcast related information is recorded in the third file or

a fourth file as record broadcast related information, whether the broadcast related information is recorded in the third file or the fourth file is indicated by a broadcast related information recording file ID flag in the management data, a content of the record broadcast related information is indicated by a broadcast related information ID flag in the management data.

11. The data broadcast recoding method according to Claim 4, characterized in that broadcast related information is recorded in the third file or a fourth file, data obtained by copying or cutting all or a part of the broadcast related information or all or a part of record broadcast related information recorded in the third file or the fourth file is recorded in the third file as related extraction data, whether the broadcast related information is recorded in the third file or the fourth file is indicated by a broadcast related information recording file ID flag in the management data, and a content of the record broadcast related information and a content of the related extraction data are indicated by a broadcast related information ID flag in the management data.

12. The data broadcast recoding method according to Claim 5, characterized in that broadcast related information is recorded in a new file, data obtained by copying or cutting all or a part of the broadcast related information or all or a part of record broadcast related information recorded in the new file is recorded as related extraction data in a file corresponding to the encoding format, which file the broadcast related information is recorded in is indicated by a broadcast related information recording file ID flag in the management data, and a content of the record broadcast related information and a content of the related extraction data is indicated by a broadcast related information ID flag in the management data.

13. The data broadcast recoding method according to Claim 6, characterized in that broadcast related information is recorded in the third file or a fourth file as record broadcast related information, data obtained by copying or

cutting all or a part of the broadcast related information or all or a part of the record broadcast related information is recorded in the third file as related extraction data, whether the broadcast related information is recorded in the third file or the fourth file is indicated by a broadcast related information recording file ID flag in the management data, a content of the record broadcast related information and a content of the related extraction data is indicated by a broadcast related information ID flag in the management data.

14. The data broadcast recoding method according to Claim 7, characterized in that broadcast related information is recorded in a new file as record broadcast related information, data obtained by copying or cutting all or a part of the broadcast related information or all or a part of the record broadcast related information is recorded as related extraction data in a file corresponding to the encoding format, which file the broadcast related information is recorded in is indicated by a broadcast related information recording file ID flag in the management data, and a content of the record broadcast related information and a content of the related extraction data is indicated by a broadcast related information ID flag in the management data.

15. The data broadcast recoding method according to any one of Claims 8 to 14, characterized in that the broadcast related information comprises all or a part of Internet additional information including Internet information related to broadcast, program additional information, director's cut information, director's comment information, E-commerce information, chat information, and preview information.

16. The data broadcast recoding method according to any one of Claims 4 to 7 and 11 to 14, characterized in that the broadcast extraction data or the related extraction data comprises all or a part of moving-picture data, still-picture data, audio data, animation data, graphic data, and character data.

17. The data broadcast recoding method according to any one of Claims

1 to 14, characterized in that the data broadcast includes program linked data broadcast, independent data broadcast, audio broadcast, or radio broadcast.

18. The data broadcast recoding method according to any one of Claims 3, 6, 7, 9, 13, and 14, characterized in that if the data broadcast is program linked data broadcast, the data broadcast is recorded in the second file, and if the data broadcast is independent data broadcast, the data broadcast is recorded in the third file.

19. The data broadcast recoding method according to any one of Claims 1 to 14, characterized in that:

the data broadcast recording file ID flag in the management data or the broadcast related information recording file flag indicates whether the data broadcast or the broadcast related information is recorded in a relevant file or a file in which the data broadcast or the broadcast related information is recorded; and

the data broadcast ID flag in the management data or the broadcast related information recording file flag indicates all or a part of whether the data broadcast or the broadcast related information is recorded in a relevant stream, whether the broadcast extraction data/the related extraction data is obtained through direct recording, copying, or move, and a file name, a source stream name, a source stream number, and a type and a compression method of the broadcast extraction data/the related extraction data if a source exists in the case in which the broadcast extraction data/the related extraction data is obtained by copying or move.

20. The data broadcast recoding method according to any one of Claims 1 to 14, characterized in that all or a part of a flag indicating whether data broadcast is included in a record stream/whether data broadcast linked with the main broadcast is included/whether independent data broadcast that is not linked with the main broadcast is included/whether independent audio broadcast that is

not linked with the main broadcast is included/whether Internet information or streaming data is included, a flag indicating a normal broadcast stream or a storage broadcast stream, a flag indicating a compression method, a flag indicating whether a transmission method of the data broadcast is a data carrousel mode/an event message transmission mode/a mode including both the modes, a flag indicating whether the mode is a mode for recording all the broadcast data or a mode for recording only refresh data in the case of the data carrousel mode, a flag indicating whether auto renewal is performed in the case in which the broadcast extraction data/the related extraction data is news, weather forecast, stock information, or the like, a flag indicating whether a updated data refresh time and a time map exist, is recorded in the first file.

21. The data broadcast recoding method according to Claim 18 or 19, characterized in that the flag indicating the compression method includes all or a part of a moving-picture data compression method flag indicating a type of MPEG video, H.264 video, or Windows (registered trademark) Media video, an audio data compression method flag indicating a type of MPEG audio, Dolby audio, or DTS audio, a still-picture data compression method flag indicating a type of JPEG or PNG.

22. A data recording device for recording data through the data broadcast recoding method according to any one of Claims 1 to 14 and/or a data reproduction device for reproducing data recorded through the data broadcast recoding method.

23. A recording medium on which recording is performed through the recoding method according to any one of Claims 1 to 14.

24. A recording medium, characterized by comprising a file for recording data broadcast and a separate file for recording management data related to the broadcast.

25. The recording medium according to Claim 24, characterized in that in

the separate file, data related to a type of broadcast data is recorded as the management data.

26. The recording medium according to Claim 25, characterized in that the data related to the type of the data broadcast includes a data broadcast recording file ID flag and/or a data broadcast ID flag.

27. The recording medium according to Claim 26, characterized in that the data related to the type of the data broadcast further includes broadcast related information recording file ID flag and/or broadcast related information ID flag.